

SCIENTIFIC RESULTS OF THE KATMAI EXPEDITION OF THE  
NATIONAL GEOGRAPHIC SOCIETY.

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DIPTERA OF THE FAMILY DOLICHOPODIDAE.

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*Campsicnemus claudicans*, Loew.

Nine males and thirty-six females were taken at Kodiak, June, 1917, and Savonoski, Naknek Lake, in July, 1919. This species was described from Alaska, Dr. Aldrich has reported it from Idaho.

*Campsicnemus degener*, Wheeler.

Four males were taken at Savonoski, Naknek Lake, Alaska, in July, 1919. This species has been taken only in California and Idaho as far as known to me, it is interesting to find it in Alaska.

*Porphyrops consobrina*, Zett.

Fifteen males and ten females taken in Alaska in June and July, 1917, and 1919, at Katmai, and Savonoski, Naknek Lake.

Coquillett reported this species from Alaska in 1900, Dr. Aldrich in his Catalogue of Diptera, 1905, in a note says the determination of this species seem to be premature, but I have compared these Alaska specimens with Dr. Lundbeck's description of that species and cannot see where there can be any doubt of its identity. Am giving below the characters that distinguish the species.

Face narrow, silvery white. Palpi black. Beard yellowish white. Third antennal joint nearly twice as long as the two basal joints taken together; arista shorter or about as long as the antenna. Hypopygium with its outer lamellæ (Fig. 1 a) short, blackish, the apical part somewhat triangular, about as long as wide, and about as long as the stem, which is rather broad; inner appendages (Fig. 1 b) black, lanceolate, nearly as long as the outer lamella. All coxæ black with long pale hair; middle pair without a spine at tip. All femora black with yellow tips; posterior pair with one or two preapical bristles; middle pair with long white hair below at base and a few black bristles on each

side at tip; fore femora thickest in the middle, with long black bristles below for their entire length, these are as long as the width of the femora, on the posterior surface there are long pale hairs, but the upper row of long hairs is black. Hind tibiae black with the upper edge yellow almost to the tip, or yellowish with the tip broadly black, its bristles short. Fore and middle tibiae pale yellow with strong bristles. Fore tarsi (Fig. 1) as long as their tibiae, the first joint fully as long as second, slightly widened below and with a row of stiff black hairs above and below, second joint very slightly enlarged at base, or I might say slightly narrowed just beyond the base below, last three joints taken together but little longer than the first, fifth nearly as long as the third and fourth together. Hind basitars about (sometimes scarcely) as long as second joint.

Wings grayish hyaline; third vein with a gentle and even curve; last section of fourth vein a little bent at its middle, nearly parallel with the third at tip and ending in the apex of the wing; last section of fifth vein a little longer than the cross-vein; hind margin of wing nearly evenly rounded, still a little expanded basally from the tip of fifth vein.

*Porphyrops elegantula*, Meig.

Four males and seven females were taken at Savonoski, Naknek Lake, Alaska, in July, 1919.

The male of this large fine European species is easily distinguished by its bright metallic color, the sixth abdominal segment being steel blue or violet. The outer lamellæ of the hypopygium (Fig. 2) are long, simple, narrow, pointed and of a yellowish or light brown color. Inner appendages black and slightly spoon-shaped, as long as the width of the hypopygium. Both the middle and hind coxæ have black spines at their tip, those on hind coxæ the shortest. Femora yellow; the posterior pair with black tips and two preapical bristles. Fore basitarsi expanded at tip below, as long as the two following joints taken together. Arista as long or a little longer than the antenna. Face silvery white, narrow, palpi grayish or yellow, third vein gently arched; last section of fourth vein nearly straight.

*Porphyrops crassipes*, Meig.

Two males and two females were taken at Savonoski, Naknek Lake, Alaska, in July, 1919.

There can be no doubt of this determination, it is an interesting species the distinguishing characters of which are:

Face narrow, silvery white. Beard white, abundant. Arista longer than the antennæ. Hypopygium with the outer lamellæ yellowish, very long and slender, forked near the middle, one branch shorter than the other. Fore and hind femora black, the latter considerably thickened, with a preapical bristle. Fore coxæ blackish with long white

hair; posterior pair with a tuft of black bristles at tip (not forming a spine); middle pair without a spine at tip. Middle femora mostly yellow, blackened at base only; their tibiae and tarsi yellow, last two joints of the tarsi (Fig. 3) black, compressed and widened, forming together an oval tip to the tarsi, which is not much longer than wide, the fourth joint shorter than the fifth. Fore femora with long white hair on the posterior surface; fore tarsus as in Fig. 3 a, middle ones with some white hairs at base below. Wings rather broad, widest between the tips of fifth and sixth veins, the hind margin sinuous; last section of fourth vein and the third vein much bent so that they are much further apart near the middle of last section of fourth than at their tips.

*Porphyrops tricaudata*, new species.

Male: Length, 4 mm.; of wing the same. Face very narrow, silvery white. Palpi black. Front green. Antennae black; third joint about twice as long as the two basal joints taken together. Arista about as long as the antenna. Orbital cilia black, descending to upper third of the eye. Beard abundant, whitish; eyes with white hair.

Thorax and abdomen green, a little dulled with grayish pollen, the former with the usual two dark lines in front. Hypopygium (Fig. 4) black with its outer lamellae divided into three long branches, the posterior one the shortest; they are brownish, fringed with long pale hairs; inner appendages black, straight, styliform.

Coxae and femora black; fore and middle femora yellow at tip. Fore coxae with long white hair on its anterior surface, without black ones at tip. Middle and hind coxae with less abundant white hair, without a spine at tip. Fore femora with rather long pale hair on posterior surface, those near the tip black and bristle-like. Middle femora with long white hairs below on basal half and several black bristles on each side at tip. Hind femora with one or two preapical bristles. Tibiae yellow; fore and middle ones each with two rows of long bristles; posterior pair a little blackened at tip, its bristles rather strong, but shorter than on the other tibiae. Fore tarsi (Fig. 4 a) longer than their tibiae, the first two joints and base of third yellow, last three joints black; first joint thickened at tip, as long as second, second a little excavated below near the base and slightly so before the tip; first and basal half of second joint with a row of minute blunt spines below; third and fifth joints of nearly equal length, fourth a little shorter; middle tarsi yellow with last two joints black, of nearly equal length, slightly compressed, so that the fifth is twice as wide as the third. Hind tarsi brown, only the last two joints black, first scarcely longer than the second and about equal to the third and fourth taken together; fifth joint but little longer than wide. Calypters, their cilia and the halteres yellow.

Wings grayish; third vein gently and evenly arched; last section of fourth vein a little bent just beyond its middle, nearly parallel with third towards its tip, ending in the apex of the wing; last section of fifth

vein scarcely twice as long as the cross-vein; hind margin of wing nearly evenly rounded.

Female: Face wide, gray, the ground color sometimes showing through on the lower part, which is somewhat rounded in outline below; suture just below the middle of the face. Antennæ black, small, third joint about as long as wide, scarcely pointed at tip, arista nearly three times as long as the antenna. Front opaque with gray pollen. Beard yellowish white. Palpi large, obtusely pointed, black with black hair and white pollen. Fore coxæ more or less yellowish with rather long white hair; I see two black hairs at tip in some specimens. Femora and tibiæ yellow; posterior femora and tibiæ blackened at tips. Fore femora with a row of rather long black hairs on upper posterior edge, ending in several slender bristles. Middle and hind femora each with one or more preapical bristles. Fore and middle tarsi darkened from the tip of first joint, still only the apical joints black, both with their joints normal, the first joint being nearly as long as the following three joints taken together. Hind tarsi about as in the male. Wings as in the male, except that the last section of fifth vein is fully twice as long as the cross-vein.

Described from one male and seven females, taken at Savonoski, Naknek, Lake Alaska, in June and July, 1919, and two females from Katmai, Alaska, in August, 1917.

This is very much like *tridactyla* Frey, from Lapland. The male differs in having the inner appendages of the hypopygium nearly straight and not enlarged at tip; and in having the hind tibiæ largely yellow.

The outer lamellæ are also very slightly different from his drawing of those of *tridactyla*. The female differs in having the tips of the hind femora broadly black on upper and lateral surfaces. The front nearly opaque with white pollen, and the last two joints of middle tarsi not widened.

#### *Porphyrops* sp.

One female from Katmai, Alaska, July, 1917.

Has the face with brownish pollen, antennæ short, third joint as wide as long, the arista about three times as long as the antennæ; beard long, yellowish. Fore coxæ with very long yellow hair, no black ones at tip; fore femora black at base with whitish hairs below on basal half and long black ones on apical two-thirds of posterior surface; fore tarsi longer than their tibiæ, black from the tip of the first joint, the first joint scarcely as long as the two following joints together; third and fourth veins of the wing gently bent; last section of fifth vein fully twice as long as the cross-vein.

*Porphyrops* sp.

Four females from Savonoski, Naknek Lake, Alaska, taken in June and July, 1919.

Face with the suture near the middle, its pollen yellowish, lower part somewhat metallic. Antennæ short, arista about three times as long as the antenna. Hair on fore coxæ moderate long, yellowish white, no black ones at tip; fore femora yellow with a row of black hairs on upper posterior edge, ending on two bristles; fore tarsi longer than their tibiæ, blackened from the tip of the first joint, which is as long as the two following taken together; middle femora with several, hind ones with one preapical bristle. Third vein nearly straight; last section of fourth vein a little bent at its middle; last section of fifth vein nearly twice as long as the cross-vein.

*Porphyrops nigra*, new species.

Male: Length, 4 mm.; of wing, 3.7 mm. Face very narrow, black. Palpi black. Front opaque black; eyes with brown hairs. Antennæ black; third joint about as long as the two basal joints taken together; arista about equal to the antenna in length. Hairs of the beard mixed black and brownish.

Thorax black, scarcely at all greenish on the dorsum, which is dulled with brown pollen. Abdomen dark green, the apical segments almost black. Hypopygium black; its outer lamellæ very broad at base (Fig. 5 a), forked, one branch wide, short and blunt, the other long, rather narrow and more pointed; they are brownish; inner appendages (Fig. 5 b) yellow, black at upper corner, enlarged and truncate at tip, fringed with pale hairs. Coxæ black with long black hairs; middle pair with a long black thorn at tip. Femora black, a little yellowish at tip fore femora with long black hair on posterior surface; middle femora with long black hair below and three slender bristles on posterior side and one on anterior side at tip; hind femora with long black hair below, which is a little longer towards their tips. Fore tibiæ more than half black; middle pair yellowish, blackened on basal half above, four anterior tibiæ with strong bristles; hind tibiæ dark yellow, scarcely darker at tip, but dark at base, thickened towards the tip, their bristles stout. Fore tarsi (Fig. 5) one and a fourth times as long as their tibia, black from the tip of the first joint, still the base of the second joint a very little yellow, first joint as long as second, a very little thickened at tip, second joint abruptly narrowed near the base, both these joints with minute blunt black spines below, the three apical joints of nearly equal length. Middle tarsi with the two first joints yellow, the second half as long as the first (other joints missing). Hind tarsi black, second joint shorter than the first and fifth, only slightly shorter than the fourth. Calypters and halteres yellow, the former with black cilia.

Wings dark gray, with black veins; third vein considerably but evenly arched; last section of fourth vein only slightly bent near apical

third, ending slightly back of the apex of the wing; last section of fifth vein about twice as long as the cross-vein; hind margin of wing nearly evenly rounded.

Female: A female that I think belongs with the male described above, although not taken at the same place or in the same year, has the wing about as in the male, except that they are a little darker with a slightly hyaline spot around the cross-vein; the bend in the last section of the fourth vein is a little nearer its center, but otherwise about the same; it ends just back of the apex of the wing as in the male. The face is gray with the suture near its center; palpi black with black hairs; beard whitish; front, thorax and abdomen green with gray pollen; coxæ with long white hairs. Femora black with yellowish tips; fore femora with long white hair on the posterior surface; middle and hind ones with pale hairs below, the latter with a row of slender black bristles on lower outer edge; middle femora with two bristles on each side at tip; fore and middle tibiæ yellow, hind ones like those of the male; fore and middle tarsi as long as their tibiæ, darkened from the tip of the first joint, which is as long as the three following taken together.

Described from one male taken at Katmai, Alaska, in July, 1917; and one female taken at Savonoski, Naknek Lake, Alaska, in June, 1919.

*Porphyrops borealis*, new species.

Male: Length 4-4.5 mm.; of wing, 3.3-4 mm. Face narrow, black. Palpi black. Front green, nearly covered with white pollen. Antennæ black; third joint scarcely longer than the two basal joints taken together; arista about as long as the antennæ. Beard black, sometimes more brown. Eyes with pale hairs.

Thorax and abdomen green with whitish pollen, the former quite shining. Hypopygium (Fig. 6) black; its outer lamellæ long and narrow, yellowish brown, plain, as long as the height of the hypopygium and fringed with long pale hairs; the inner appendages very small, black, with a hair at tip.

Coxæ black with black hair, the middle pair with a black thorn at tip. Femora black; anterior pair with long black hair on their posterior surface; middle pair with several black bristles on each side near the tip; posterior pair with two preapical bristles. Fore and middle tibiæ yellow, the former with two, the latter with three rows of long bristles. Hind tibiæ blackish or yellowish brown with a yellow glabrous line on upper surface, and with two rows of rather stout bristles. Fore tarsi longer than their tibiæ, darkened from the tip of the first joint, which is about twice as long as the second and a little enlarged at tip; last three joints of about equal length. Middle tarsi black from the tip of the first joint, slightly longer than their tibiæ; the first joint nearly as long as the three following taken together, fourth scarcely longer than the fifth. Hind tarsi black, each joint a little longer than the one

following it. Halteres yellow. Calypters dark yellow with yellowish cilia, which appears black in certain lights.

Wings grayish; third vein considerably but evenly arched; last section of fourth vein bent near its middle, ending in the apex of the wing; last section of fifth vein scarcely twice as long as the cross-vein; hind margin of the wing rather evenly rounded.

Female: What seems to be the female of this species has the face gray; the suture below the middle, making the lower part of the face small; it is a little pointed at the center of its lower edge; palpi black, rather small, their tips yellowish; beard white, scanty; fore coxæ with yellow hairs, sometimes with one or more black hairs at tip; femora and tibiæ yellow; hind femora more or less black at tip or along the upper edge; middle and hind femora with preapical bristles; fore tarsi scarcely as long as their tibiæ, the first joint as long as the remaining four taken together; middle tarsi fully as long as their tibiæ, first joint as long as the three following joints taken together; hind tarsi black, first and second joints of nearly equal length. Wings gray; slightly brownish in front of second vein; third vein very slightly recurved at tip; last section of fifth vein more than twice as long as the cross-vein.

Described from six males and eight females, taken at Savonoski, Naknek Lake, Alaska, in June and July, 1919, and two males taken at Katmai, Alaska, in July, 1917 and two males taken by J. M. Aldrich at Anchorage, Alaska, July 20, 1921

*Xiphandrium femoratum*, new species.

Male: Third antennal joint band-like, as long as the height of the head, its arista about one-third of the length of the third joint. All coxæ black, the fore pair more or less yellow on apical half, their anterior surface with long silvery white hairs. Fore femora, except extreme base and tip, and apical third or more of hind femora black; middle femora yellow. The four anterior tibiæ yellow; hind tibiæ and their tarsi wholly black. Outer hypopyginal lamellæ elongate, slender triangles with a slender stem; inner appendages somewhat shovel-shaped, not at all clubbed, rather obliquely truncate at apex.

Four males were taken at Kodiak, Alaska, in June, 1917, and one female at Katmai, Alaska, in August, 1917.

This is more fully described in transaction of the American Entomological Society, Vol. xlviii, p. 81

Since sending off the specimens I have decided to place as a distinct variety a form of this that has a thumb-like projection on the inner appendages near the middle of their length, calling it var. *pollex*, both are found in the Alaska material, as also in my Wells, Nevada, material.

*Sympycnus aurifacies*, Van Duzee

Male: Length, 1.7 mm.; of wing, 2 mm. Face narrow, golden yellow. Front dark blue or violet. Palpi yellowish, very small. Two basal joints of the antennæ orange yellow; third joint black, twice as long as wide, rather pointed at tip. Lower orbital cilia white, short.

Thorax greenish brown; dorsum with a median green line and a poorly defined purple stripe on each side of the line, sometimes the dorsum is so thickly covered with brown pollen as to conceal these lines; scutellum blue or violet, green around the edges, with one pair of large bristles. Abdomen short, depressed, bronze green, dull, its hairs black. Hypopygium almost entirely concealed. Fore coxæ wholly yellow, appearing bare, but with a few minute yellowish hairs. Middle and hind coxæ blackish. Femora and tibiæ wholly yellow and with very short hairs, those on the sides and lower surface of the femora are yellow and so minute that they appear bare. Middle femora with a small bristle on each side near the tip; hind pair with one preapical bristle. All tibiæ with a few very small bristles. All tarsi black from the tip of the first joint; anterior pair about one and a half times as long as their tibiæ, the first joint nearly as long as the two following joints taken together; the last three joints each a very little longer than the following joint. Middle and hind tarsi scarcely as long as their tibiæ; hind basitarsus scarcely as long as the following joint. Calypters, their cilia and the halteres yellow.

Wings tinged with brownish gray, veins black; fourth vein ending in the apex of the wing; last section of fifth vein twice as long as the cross-vein.

Female: Face nearly twice as wide as in the male, golden yellow; upper edge of first two antennal joints black, third joint black, smaller than in the male. Fore coxæ blackened on the front surface at base, sometimes almost to their tips; hairs on fore coxæ and legs a little longer than in the male, those on the sides of the femora mostly black; posterior knees very slightly blackened. Wings as in the male.

Described from three males and five females, taken at Savonoski, Naknek Lake, Alaska, in July, 1919.

*Medeterus viridifacies*, new species.

Male: Length, 3 mm. Face bright green, but not shining, with a transverse band of gray pollen across its center. Palpi large, black. Front opaque brown. First two antennal joints yellow, third black, small. Lateral and inferior orbital cilia yellowish.

Thorax brown, dorsum opaque with brown pollen; pleuræ more tinged with green; scutellum with four large bristles; acrostichal bristles small; three black bristles above fore coxæ. Abdomen black, quite shining. Hypopygium black, rather small, its appendages black.

Legs and feet altogether black; fore coxæ with a row of black bristles on outer anterior edge; hairs on the legs very minute; second joint of hind tarsi about one and a fourth times as long as the first. Calypters yellow, with a black edge and black cilia; halteres black.



Wings a little grayish; veins black, fourth and fifth veins more brown; last section of fifth vein nearly reaches the wing margin and is one and a fourth times as long as the cross-vein.

In the female the thorax is more shining than in the male.

Described from two males and one female; they were taken at Savonoski, Naknek Lake, Alaska, the males in July and the female in June.

*Medeterus bicolor*, new species.

Male: Length, 2.5–2.7 mm. Face dark green, with bronze reflections to nearly black. Palpi black. Front nearly opaque with brown pollen. Lower orbital cilia white. Antennæ wholly black, third joint small, a little pointed at tip.

Thorax slightly greenish; dorsum with brown pollen, which is more grayish white on its margins. Acrostichal bristles distinct; bristles above the fore coxæ small, black; scutellum with four large bristles, the median pair the longest. Abdomen dark green, almost black, shining, its hairs yellow. Hypopygium black with yellow appendages.

Fore coxæ with pale hairs on their anterior surface. Legs and feet black, knees yellow. Middle femora with long yellowish white hairs below for their entire length; hind pair with a row of black hairs or slender bristles on outer surface which are longest near the tip. Hind tarsi with the second joint nearly one and three-fourths times as long as the first. Calypters yellow with a brown edge and yellow cilia. Halteres yellow.

Wings grayish; costa black, veins brown; last section of fifth vein nearly reaching the wing margin and scarcely twice as long as the cross-vein.

Female: About as in the male, except that the second joint of hind tarsi is only about one and a half times as long as the first and the last section of the fifth vein is a little shorter.

Described from four males and five females taken at Savonoski, Naknek Lake, Alaska, in June and July, 1919.

*Medeterus parvus*, new species.

Male: Length, 2.5 mm. Face, head, thorax, abdomen and legs about as in *bicolor*, except that the second joint of hind tarsi is only about one-third longer than the first joint; the middle femora are without the long yellow bristles below, and the hind femora have a row of bristle-like hairs on lower outer edge and a row of several slender black bristles above them on outer surface. It also has the wings a little narrower near the base, the cross-vein shorter, making the last section of fifth vein fully twice as long as the cross-vein. The second joint of hind tarsi nearly one and a third times as long as the first.

Described from one male and two females, all from Savonoski, Naknek Lake, Alaska, taken in June, 1919.

## TABLE OF NORTH AMERICAN SPECIES OF HYDROPHORUS.

1. Knobs of the halteres wholly yellow.....2  
Knobs of halteres infuscated, at least on outer surface.....21
2. Postvertical bristles in a row of six or more.....3  
Postvertical bristles only two as usual.....7
3. Scutellum with two or more pairs of large bristles.....5  
Scutellum with only one pair of bristles (western species).....4
4. Face nearly or quite opaque, whitish; fore tibia and basitarsus plain.  
Face almost wholly shining metallic; fore tibia and basitarsi each with a  
distinct bend, that of the former very conspicuous.....*gratiosus* Ald.  
*curvipes* V. D.
5. Propleura with a bunch of several black bristles, (western)....*plumbeus* Ald.  
Propleura without or with only one black bristle.....6
6. Face and body wholly covered with yellow pollen, which is very thick in the  
male, (eastern).....*intentus* Ald.  
Pollen thinner and mostly gray or silvery gray, at most only slightly tinged  
with yellow, (western).....*argentatus* V. D.
7. Without a black propleural bristle.....8  
With one black propleural bristle.....13  
Usually with two or more black propleural bristles; unusually long yellow  
hair on the fore coxæ and femora, (Alaska).....*flavhirtus* new species.
8. Second vein very short, ending opposite the cross-vein, (Tex., Kans., S. D.,  
Colo.).....*cerutias* Loew.  
Second vein normal, ending far beyond the cross-vein.....9
9. Dorsocentrals minute, white, (Wyo., Kans., S. D., Calif.)....*canescens* Wh.  
Dorsocentrals black.....10
10. Middle femora with long white hairs or bristles on lower surface; cheeks  
almost invisible; middle tarsi of male with the fifth joint a little enlarged.  
(Mich.).....*agalma* Wh.  
Cheeks distinct; middle femora without or with only very short white hairs  
below, (Alaska).....11
11. Wing with the cross-vein distinctly infuscated, usually forming a brown spot  
and sometimes with a very faint spot on the last section of fourth vein.  
*pectinipes* new species.
- Wings without spots on the wings.....12
12. Middle tarsi of male plain; hairs on the dorsum of the abdomen wholly or  
mostly white.....*canites* new species.  
Middle tarsi of the male with the fifth joint somewhat flattened, nearly  
twice as long as fourth; hairs on the dorsum of the abdomen black, except  
some on the hind margins of segments.....*pectinipes* new species.
13. Face opaque with pollen, the ground color not showing through.....14  
Face with more or less metallic color showing through the pollen.....15
14. Pollen of face pure white; wings clear, without spots on the veins; veins  
broadly yellow at base, (U. S.).....*aestuum* Loew.  
Face ochre yellow, wings with a very conspicuous spot on the cross-vein and  
another on the last section of fourth vein; veins scarcely paler at base.  
(Canada).....*glabor* Walk.
15. Tips of fore tibiæ in both sexes with an acute angle produced toward the  
femora; fore coxæ with from one to three black bristles on outer upper  
corner.....16  
Tips of fore tibiæ not or but slightly angulated.....17
16. Wings without spots on the veins; face usually very bright blue-green as far  
down as the suture, (U. S.).....*philombreus* Wh.  
Wings with the cross-vein infuscated, usually forming a spot; upper part  
of the face with the ground color showing through a little, (Alaska).  
*pectinipes* new species.

17. Fore tibiae of male notched on inner side at two-thirds their length; female with quite long bristles below on apical half of fore femora, (western states; Alaska)..... *brevisetula* Thom.  
Fore tibiae of male not notched; fore femora of female with very small bristles below, or none at all.....18
18. Wings with a conspicuous spot on the cross-vein and another near the middle of the last section of the fourth vein. (Alaska).....19  
Wings clear or nearly so, without spots on the veins.....20
19. Hairs on fore coxae whitish or very pale yellow, delicate. (Alaska).  
*viridifacies* new species.  
Hairs of fore coxae deep yellow, quite long and bushy, (Alaska).  
*flavhirtus* new species.
20. Size 3 mm.; pleurae with rather thick white pollen, (Wyo., Colo.)... *sodalis* Wh.  
Size 4.5 mm.; pleurae with thin yellowish pollen, (N. M., Wyo., Colo.)...  
*magdalenae* Wh.
21. Wings with a brown spot on the cross-vein and another on last section of fourth vein.....22  
Wings without spots on the cross-vein.....34
22. Face opaque with pollen, the ground color not showing through.....23  
Face showing some metallic color, the pollen not wholly concealing the ground color.....27
23. Beard composed of black bristles and some yellowish hairs; face of female yellowish brown with a gray spot on each side below the suture; male with a small protuberance below near the tip of the fore femora, (Alaska).  
*signiferus* Coq.  
Beard yellowish, there may be a few black bristles under the neck.....24
24. Fore coxae with no black bristles, (Wyo.)..... *algens* Wh.  
Fore coxae with black bristles besides the row at tip.....25
25. Wings with the spots faint; fore coxae with a row of about 16 spines, longest towards the tip, running out proximally, (eastern)..... *pirata* Loew.  
Wings with the spots very conspicuous.....26
26. Fore coxae with an irregular row of little black bristles on outer anterior edge; pollen of inner portion yellowish or yellowish brown, contrasting with the white pollen of the outer portion; pollen of face yellowish brown, (eastern states and Colorado)..... *chrysolagus* Walk.  
Fore coxae with two irregular rows of black bristles or stiff hairs outside of the center of the anterior surface, their pollen wholly whitish; pollen of face white, (Alaska)..... *brevicauda* new species.
27. Propleurae without a black bristle, having only pale hairs above fore coxae and sometimes a yellowish bristle, (B. C.)..... *phoca* Ald.  
Propleurae with a black bristle.....28
28. Middle femora with long black bristles on anterior ventral surface, 4-5 in male and 2-3 in female, (Alaska)..... *pilitarsis* Mall.  
Middle female without bristles at base.....29
29. Females.....30  
Males.....31
30. Fore femora with about seven small spines below, (Wyoming).... *algens* Wh.  
Fore femora without spines below, (Alaska)..... *propinquus* new species.
31. Fore femora plain, without a protuberance below near the tip, (Wyoming).  
*algens* Wh.  
Fore femora with a protuberance below near the tip, preceded by about five spines in a group, (Alaska).....32
32. Many black bristles mixed with the beard, Alaska, (as determined by Malloch)..... *signiferus* Coq.  
Beard without black bristles, excepting sometimes a few under the neck...33
33. Fore coxae with pale hairs, (Alaska)..... *propinquus* new species.  
Fore coxae with the hairs wholly or almost wholly black, (Alaska).  
*nigribarbus* new species.

34. Fore coxæ with black bristles or spines besides those at tip.....35  
 Fore coxæ without black bristles except at tip, (sometimes these are missing).....40
35. Face wholly opaque with pollen.....36  
 Face showing some metallic color, there being no pollen on upper part or the pollen thin.....37
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 Fore coxæ with a row of black spines or bristles, longer towards the tip, running out basally, (eastern).....*pirala* Loew.  
 The row of bristles on fore coxæ only reaching about half their length from the tip, and of nearly equal length throughout, (Alaska).....*brevicauda* new species.
37. Fore coxæ with black hairs and also a row of slender black bristles on outer edge of anterior surface, male of.....*nigribarbus* new species.  
 Hairs of fore coxæ white or yellowish.....38
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39. Fore coxæ with a row of 5-7 long black bristles on outer anterior edge, (Alaska and Northwest States).....*innotatus* Loew.  
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43. Upper portion of the face bright blue-green, (Idaho, Wash.).....*pensus* Ald.  
 Upper portion of face dull, only a little greenish, (S. D., Que.).....*extrarius* Ald.

### *Hydrophorus signiferus* Coq.

Three females which seem to belong to this species were taken at Katmai, Alaska, 1917; Kodiak, Sept. 21, 1919; and Savonoski, Naknek Lake, in July, 1919.

The most marked character of this species as I see it is the numerous black bristles mixed with the beard. Mr. J. R. Malloch, in the Report of the Canadian Arctic Expedition 1913-1918, Vol. III, p. 51c describes what he considers the male of this species, if he is correct it belongs to the group of species with a protuberance below the fore femora near their tip, in all the species having this protuberance it is preceded by a group of five or six small blunt bristles or spines, this male he describes has numerous black bristles mixed with the beard the same as Mr. Coquellitt's female had, it is the only male that I know of with these black bristles and no doubt Mr. Malloch's determination of this male is correct.

*Hydrophorus breviseta*, Thompson.

This species is represented by 116 males and 100 females; most of these were taken at Katmai, on Aug. 23d, and at Kodiak, Sept. 1, a few were taken at Katmai in June.

*Hydrophorus canities*, new species.

Male: Length 3.5–4 mm.; of wing, 5 mm. Face wholly covered with silvery white pollen, still the metallic ground color sometimes shows through a very little below the antennæ, where the pollen is sometimes a little yellowish; cheeks and palpi with gray pollen, the former narrow and latter rather small with white hairs. Beard white, sometimes a little yellowish; there are a few black bristles below the neck; the black orbital cilia descend to the middle of the eye. Occiput greenish, the upper part often nearly opaque with brown pollen, its orbits white pollinose; one pair of postvertical bristles. Front slightly greenish, often opaque with brown pollen. Antennæ black; third joint small, roundish; arista black with apical half whitish.

Thorax green or bronze brown with more or less coppery reflections, its pollen brown; scutellum sometimes steel-blue; it has four to six marginal bristles; humeri with one or two bristles and usually several pale hairs; propleuræ with a bunch of long, stiff whitish hairs, without a black bristle; acrostichals reaching the posterior slope of the thorax; dorsocentrals about ten in a row; pleuræ and coxæ covered with gray pollen. Abdomen green with long white hairs. Hypopygium and its appendages mostly concealed.

All coxæ with rather long white hair on their anterior surface, but without black bristles, even at tip there are no black spines. Femora and tibiæ metallic green or coppery, their hairs wholly white, but short, except a few at tip of middle femora below and on upper portion of fore femora, where they are a little longer. Fore femora (Figs. 7 and 7 a) moderately thickened towards their base, with a row of about eight blunt black spines below on basal half and an irregular row of smaller ones outside of these, a row of 2–4 on apical half of front surface and one longer bristle near the tip on posterior side near the lower edge, (the inner row near the base are often difficult to see). Fore tibiæ with a comb-like row of very short spines on whole inner side, about twenty-five in number, their tips not angulated towards the femora. Middle femora with a few very short bristles, those on the lower edge about six in number and about equally spaced along their whole length. Tarsi brownish black with white hairs; fore tarsi with the first joint as long as the three following joints taken together, third and fifth of equal length, fourth very slightly shorter than fifth. Halteres yellow, knob not or scarcely darker on outer surface. Calypters yellow with white cilia.

Wings grayish, sometimes slightly tinged with yellowish brown on costal half; without spots on the veins, the cross-vein not at all infuscated; veins brown, usually yellowish at base of wing; costæ black

from the tip of first vein, yellowish at base; first vein usually wholly yellow; third and fourth veins a very little recurved at their tips, as they usually are in this genus.

Female: Much like the male in color. Face a little wider, its pollen yellowish, except below the suture, where it is yellow in the center and almost white on the sides, especially near the suture; the fore femora are less thickened and have a scattering row of very small spines on lower anterior edge and two small bristles near the tip on lower posterior edge, still the spines are sometimes arranged about as in the male, but are shorter.

Described from eighteen males and fifteen females from Alaska. Eighteen specimens were taken at Savonoaski, Naknek Lake, in June, July and August; six at Kodiak, in September and June; and three at Katmai, in July, and one in August.

*Hydrophorus pectinipes*, new species.

Male: Length, 4 mm.; of wing, 4-4.5 mm. Face widening below, covered with white pollen which wholly, or very nearly, conceals the ground color. Palpi black with a little gray pollen and white hairs. Cheeks wide, lobe-like, gray pollinose. Front green with gray pollen. Occiput green, with white pollen; one pair of postvertical bristles. Beard white; I can see two black bristles under the neck; the black orbital cilia scarcely reaching down to the middle of the eye. Antennæ black; third joint small, nearly round; arista black, its apical half with a whitish reflection; it is longer than the antenna.

Thorax green, somewhat shining, but dulled with brownish gray pollen and with blue or coppery lines. Pleuræ, coxæ, fore femora and sides of abdomen green, with thin whitish pollen. Acrostichal bristles 5-6 in number, dorsocentrals 7-9 in a row, one or two humeral bristles; propleuræ with one black bristle and several pale hairs; scutellum with four strong bristles. Dorsum of the abdomen shining green, with black hairs. Hypopygium almost entirely concealed.

Fore coxæ with delicate white hairs, no black spines at tip, but with one or two black bristles at outer basal angle. Fore femora (Fig. 8) thickened, not tapering much until about their middle, but slightly hollowed below in outline on basal half, with four long black bristles at base on lower posterior side and a row of about six small spines on lower anterior surface, which are continued towards the tip by several minute spines; they are nearly bare on the sides with a few pale hairs on upper and lower edges, the longest being at the base below. Fore tibiæ (Fig. 8) nearly straight, but rather stout, distinctly angled towards the femora at tip, with a comb-like row of erect spines on whole inner side, their hairs pale, those on anterior surface longer and having a golden reflection in certain lights. Middle and hind femora and tibiæ shining green, the former with their hairs largely black, the latter with pale hairs. Tarsi brownish; last joint of middle tarsi slightly widened, somewhat round in outline, longer than fourth; hind tarsi also with the

last joint very slightly widened and longer than fourth joint. Calypters brownish with white cilia. Halteres yellow, their stem brownish at base.

Wings tinged with brownish gray; cross-vein with a quite distinct brown cloud and sometimes there is a trace of a brown spot on last section of fourth vein; veins blackish; third and fourth veins slightly recurved at their tips.

Female: Females that probably belong here have the fore femora rather wide at base, tapering, with a minute pair of spines at basal third; fore coxæ have no black bristles at base. Face narrow (the head may be compressed or shriveled), bluish gray; fore tibiæ not angulated at tip. Middle tarsi normal, with the fourth and fifth joints of nearly equal length.

Described from three males and one female taken at Savonoski, Naknek Lake, Alaska, in July, 1919; and two females and three males taken at Katmai, Alaska, in August, 1917, and July and August, 1919.

This is much like *philombrinus* Wh. in the spinulation of fore femora and in having a bristle or two at base of fore coxæ, but it differs in having no black spines at tip of fore coxæ; in having the face wholly or almost wholly white opaque; the femora are not so evenly tapered, and the cross-vein is infuscated.

*Hydrophorus viridifacies*, new species.

Male: Length, 2.5–3.5 mm.; of wing, 4 mm.; length of female, 3–4.5 mm.; of wing of female, 4.5–5 mm. Face usually shining green. Above the suture, the lower part covered with white pollen, still the ground color shows through more or less on the lower part, sometimes the pollen is a little darker in color and dulls even the upper portion of the face. Front green, nearly opaque with brown pollen. Occiput metallic green or coppery red, not very bright. Beard white, with more or less of a golden luster, especially near the roots of the hairs; there are several black bristles under the neck; the black orbital cilia descend to the lower third of the eye; one pair of postvertical bristles. Palpi black with gray pollen and white hairs. Antennæ black; third joint small, somewhat round, notched at tip.

Thorax bronze brown, with green coppery reflections, and with thick brown pollen; pleuræ more metallic with gray pollen; propleuræ with one black bristle and several stout pale hairs; acrostichal bristles numerous and extending to the posterior slope of the thorax; about seven dorsocentrals in each row; two humeral bristles; scutellum with four large bristles. Abdomen green, dulled with white pollen, which is thick and silvery on the sides, its hairs pale. Hypopygium mostly concealed.

Fore coxæ with yellowish white hair and one black spine at tip on outer corner. Femora and tibiæ green, their hairs pale. Fore femora (Fig. 11) thickened near the base, tapering, with about eight rather long spines below on basal half. Fore tibiæ straight, without spines on inner side, but with several small bristles. Tarsi brownish; fore tarsi with the first joint nearly as long as the three following joints taken together, fourth and fifth of nearly equal length. Calypters and halteres yellow, the former with whitish cilia.

Wings dark grayish; veins brownish black, usually broadly yellowish at base; a brown spot on the cross-vein and another on the middle of the last section of fourth vein, these spots distinct to the naked eye; third and fourth veins a little recurved at tip.

Female: Face with the pollen more yellow. Fore coxæ with two or more black spines at tip. Fore femora without spines below, or with one very minute one near the middle; hairs on the middle and hind femora partly black. Otherwise about as in the male.

Described from 25 males and 32 females from Alaska. These were taken at Katmai, July and August 23, 1917, and at Savonoski, Naknek Lake, in June, July and August, 1919.

The typical form has the face bright green above with white pollen below in both sexes, but many specimens that I cannot separate have the pollen more yellow and covering most of the face.

This form is something like *chrysologus* Walker, but that species has the front and face wholly opaque with yellowish brown pollen, and the fore femora has two rows of rather large spines below, all of which is different in this species. The knobs of the halteres are also blackish in *chrysologus*, while in this species they are wholly yellow. I have a specimen which I took at Kearney, Ont., which I have determined as *glabor* Walker. It is very nearly like *Chrysologus*, but is smaller and has the halteres wholly yellow, and has the face very much narrowed above, much more so than in *chryloffus*.

#### *Hydrophorus propinquus*, new species.

Male: Length, 4-5 mm.; of wing, 5 mm. Face wide, with white pollen, the metallic ground color showing through on upper portion, usually nearly down to the suture, ground color green, but just below the antennæ it is more bronze and has thin brownish pollen. Palpi black with black hairs. Front wholly opaque brown. Occiput green, with a little brown pollen just back of the vertex, along the orbits and on the narrow cheeks the pollen is gray. Beard yellow; there are some black bristles under the neck; the black orbital cilia descend to about the lower fifth of the eye; one pair of postvertical bristles. Antennæ



black; third joint rather small, rounded; arista longer than the antennæ, with a whitish reflection at tip.

Dorsum of thorax polished brown or blackish, a little green on lateral edges where there is thick brown pollen; pleuræ more green with thick white pollen on lower portion; two humeral bristles; about ten dorso-centrals in each row; scutellum with two marginal bristles; propleuræ with a cluster of pale hairs just above the fore coxæ and above these a large black bristle. Abdomen green, upper surface shining with coppery reflections and black hairs, its sides thickly white pollinose and with some long pale hairs; venter grayish, with a few pale hairs. Hypopygium concealed, its outer lamellæ projecting posteriorly, large, oval, fringed with little white hairs, its other appendages usually wholly concealed.

Anterior surface of fore coxæ green, with white pollen and yellowish hairs; on the outer edge of apical half there is a row of about six black bristle-like hairs and at tip about four more; middle and hind coxæ black with thick white pollen; middle pair with the hairs on outer half of anterior surface black, those on inner edge and at tip long and pale. Femora and tibiæ green, their hairs largely black, still there are many pale ones on upper and lower surfaces of the middle and hind pairs of femora, and those on the tibiæ may be largely pale. Fore femora (Fig. 9) not much thickened, the lower surface on its anterior edge with a row of short spines; near the tip there is a small protuberance, preceded by six long stout bristles and one long bristle at tip; seen from above these femora are quite crooked; their tibiæ rather stout, with a small tubercle near the base on anterior surface, the row of black spines on inner surface are erect and rather long, not quite reaching the tip; the anterior surface of apical half or more with conspicuous yellow hairs; their tips normal, not angulated towards the femora. Tarsi blackish, plain. Halteres yellow, with the outer surface of the knob blackened. Calypters brownish yellow, with pale yellow cilia.

Wings grayish; cross-vein clouded with brown; a small brown spot near the middle of the last section of fourth vein; veins wholly blackish; third and fourth veins slightly recurved at their tips.

Female: Face with brown pollen, the ground color showing through above. Fore coxæ with the hairs partly black. Fore femora without spines below, except two or three small ones near the tip, they have a very slight protuberance below near the tip (easily overlooked); fore tibiæ plain, with a few slanting spines on inner surface. Otherwise about as in the male.

Described from 32 males and 28 females from Alaska. They were taken at Katmai, in July and August, 1917; Kodiak, June, 1917, and September, 1919; and Savonoski, Naknek Lake, in July and August, 1919.

*Hydrophorus nigribarbus*, new species.

The male is very much like the male described above, except that the hairs of the fore coxæ are wholly black; those

on middle coxæ also seem to be wholly black; the spines on the lower surface of fore femora are less conspicuous; the wings are conspicuously tinged with brown along the front and the veins are margined with brown, the fore femora are formed about as in the preceding species. The specimen from Savonoski has the wings nearly clear except the spots on the veins.

Described from five males taken at Katmai, Alaska, in July and August, 1917, and one male taken at Savonoski, Naknek Lake, Alaska, in August, 1919.

The female of this is probably about the same as that of the species above and no doubt are mixed with those of that species, but I cannot separate them.

This makes seven species described with nearly the same form of male fore femora, that is with a protuberance below near the tip, proceeded by a few blunt spines. Three are from Europe and four from North America; the European species are *borealis* Loew; *albiceps* Frey, and *magnicornis* Frey; from America we have *amplectens* Ald., from Brookings, S. D.; Battle Creek, Mich., and Essex Co., N. Y. This differs from all the other species in having the wings clear, without spots on the veins, and it also differs from all others in having the pollen of the face brownish yellow, except *signiferus* Coq., the male of which has the pollen more or less yellowish brown (male as determined by Malloch), but in that species the beard is composed of black bristles mixed with pale hairs; in all the other six species the beard is pale, with sometimes a few black bristles under the neck; all the other five species have the pollen of the face white or silvery; *albiceps* has the face wholly covered with white pollen; the other four show the metallic ground color on the upper part of the face; *Magnicornis* differs from the others in having the third antennal joint unusually large; in all the other forms the third joint is small or rather small and round or nearly so; *propinquus* differs from *borealis* and *nigribarbus* in having the hairs of the fore coxæ wholly pale and those on middle coxæ partly pale. Perhaps *nigribarbus* described above will prove to be *borealis*, but it differs from Dr. Lundbeck's description of that species in having the wings brown in front and in lacking the dense hair on fore femora; still they must be compared to make sure that they are not one species, especially as both are arctic.

*Hydrophorus flavihirtus*, new species.

Male: Length, 4.2 mm.; of wing, 4.5 mm. Face broad, but little narrowed above, dark but shining green, with only a little brownish yellow pollen on the sides and lower edge of the portion below the suture. Palpi black, with yellow hairs. Front opaque brown. Occiput more metallic, with one pair of postvertical bristles; about twelve black orbital cilia on each side, reaching down to the middle of the eye. Beard golden or orange yellow, with black bristles under the neck. No cheeks visible. Antennæ black, third joint small, about as long as wide, truncate at tip; arista nearly twice as long as the antennæ.

Dorsum of thorax metallic brown with green reflections and brown pollen; pleuræ more green with yellowish brown pollen; propleuræ with two or three black bristles and several pale hairs (these black bristles may have a yellowish reflection in certain lights). Abdomen green, with black hairs above and a very few white ones on the sides at base, its lower edges with thick white pollen. Hypopygium concealed, its outer lamellæ nearly as long as the hind basitarsus, not half as wide as long, fringed with a few small white hairs.

Fore coxæ greenish, with a little yellow pollen and long, stiff, almost golden yellow hairs on anterior surface; there are several small black spines at tip. Fore femora (Fig. 10) considerably thickened at base, with a row of about eight rather long black spines on basal half below, and about the same number of thinner ones in a row on lower posterior edge of apical half, besides these they have black hairs on the sides and abundant, rather long, yellow hair all over. Fore tibiæ with a row of rather short, erect spines on lower or inner side and longer black bristles above, also numerous pale hairs on upper and lower edges and some black hairs on the sides. Middle and hind femora and tibiæ green, with black and pale hairs, those on lower surface mostly pale and longer. Tarsi blackish, of the usual form. Calypters and halteres dark yellow, the former with yellow cilia, the knobs of the halteres scarcely darker on outer surface.

Wings blackish gray, tinged with brown in front of third vein, with a dark brown spot on the cross-vein and another on the middle of the last section of the fourth vein; veins wholly blackish; third and fourth veins nearly parallel towards their tips.

Female: Agrees with the male in color. Hair on the fore femora and coxæ unusually long and yellow, as in the male; no black spines below on the fore femora.

Described from one pair taken at Savonoski, Naknek Lake, Alaska, in July and August, 1919; and one female taken at Katmai, Alaska, in August, 1917.

*Hydrophorus brevicauda*, new species.

Male: Length, 4-4.2 mm.; of wing, 5-5.3 mm. Face usually quite bright green above, with white pollen covering most of the lower part, but sometimes the ground color is nearly or wholly concealed by white

pollen. Palpi with yellowish pollen and both black and yellow hairs on the upper surface. Cheeks wide, lobe-like. Front opaque dark brown, still sometimes the green ground color shows through a little. Occiput metallic with the orbits and cheeks gray pollinose; one pair of postvertical bristles. Beard golden yellow, long, but not very abundant, with several black bristles under the neck; black orbital cilia descending nearly to the lower fourth of the eye. Antennæ black, third joint small, about as long as wide, truncate and with a notch at tip.

Dorsum of thorax bronze brown, its lateral sides quite bright green; pleuræ greenish, with its pollen a little brown above, white below; acrostichal bristles long and reaching the posterior slope of the thorax; 10-12 dorsocentral bristles in each row; propleuræ with long bristle-like yellow hairs and one large black bristle. Abdomen green, with black hairs above and abundant yellow hairs on the sides for its entire length. Hypopygium concealed, its outer lamellæ usually projecting about as far as the length of the third antennal joint, sometimes a little more when they are fully extended.

Fore coxæ green, with white pollen; their anterior surface with bright yellow hair, which is much longer on outer half, especially at base, and with a row of black bristles on outer edge of apical half; these are usually eight in a row; there are also a few black spines at tip; middle coxæ with their hairs partly black and partly yellowish. Fore femora a little thickened near the base, their hairs largely black; they have a few very small spines below on basal half, which seem to be in two irregular rows, the posterior one continued nearly to the tip by little hair-like black bristles. Fore tibiæ with a row of very short, erect spines on whole inner side. All femora and tibiæ metallic green. Tarsi blackish. Calypters yellow, their cilia pale yellow. Knobs of halteres black, their stem and sometimes the inner surface of the knob more yellowish.

Wings dark gray, without spots on the veins; veins black, not paler at the base of the wing; third vein considerably bent near its tip, which is scarcely recurved; last section of fourth vein nearly straight.

Female: Pollen of the face more yellowish brown, upper part of face metallic green; beard and fore coxæ with the same deep yellow hairs as in the male; fore coxæ with fewer black spines on outer edge; fore femora without spines below; fore tibia without the row of spines on inner side; wings about as in the male.

Described from eleven males and nine females, all taken at Savonoski, Naknek Lake, Alaska, in July and August, 1919.

This is like *flavihirtus*, new species, in having the beard almost golden yellow and the fore coxæ with long yellow hair. The male differs in having short outer lamellæ, much shorter hair on fore femora, in having a row of small black bristles on apical half of fore coxæ, the third vein is more abruptly bent near the tip, and the wings are without spots on the veins. The females differ in the wing characters in the same manner as the males.

Although there is a great difference in the amount of white pollen on the face of several of the males, still I think they are all one species.

*Dolichopus solidus*, VanDuzee, Cole & Aldrich.

One male of this species was taken at Savonoski, Naknek Lake, Alaska, in July, 1919.

This species was described from a single male from Alaska, which was in very poor condition, all the tarsi being partly or wholly broken off, so I will give the following characters not contained in the original description of the species published in the U. S. National Museum Bulletin 116, p. 104, 1921.

Fore tarsi a little more than one and a fourth times as long as their tibiae, first joint scarcely as long as the two following taken together, second and third joints of nearly equal length, fourth and fifth joints compressed and fringed on each side, forming together a nearly round tip to the tarsi, the two joints of equal length. In this specimen the hind tibiae are nearly wholly blackened and considerably thickened, the middle tarsi infuscated almost to their base, the whole of the legs and feet being darker than in the type specimen. The cilia of the calypters is decidedly black in certain lights, in other lights it is quite yellowish; in the type it was black; if yellow in any light I did not notice it.

*Dolichopus rupestris*, Hall.

Thirteen examples were taken at Katmai, Alaska, in August, 1917.

*Dolichopus renidescens*, Melander and Brues.

Eighteen examples were taken at Savonoski, Naknek Lake, Alaska, twelve in July and six on August 1, 1919. This is the first record of this species from Alaska.

*Dolichopus discifer*, Stam.

One specimen was taken at Katmai, Alaska, in August, 1917.

*Dolichopus deterus*, Loew.

One specimen was taken at Savonoski, Naknek Lake, Alaska, in 1919. This is the first record of the species from Alaska or any of the western states.

*Dolichopus litoralis*, Van Duzee, Cole & Aldrich.

One example was taken at Katmai, Alaska, in August, 1917. This was described from two males taken in the state of Washington.

*Dolichopus* sp.

One female taken at Katmai, Alaska, in August, 1917. This would run in the table of females in the U. S. National Museum Bulletin 116, 1921, on page 30, couplet 60, to *xanthocnemus*, but is a stouter species and the pollen of the face is more gray, not white, the middle femora are also deep black, with only their tips yellow; in *xanthocnemus* the middle femora are broadly yellow at tip, the yellow shading into the black. This seems to belong to an undescribed species.

*Dolichopus uxorcula*, Van Duzee, Cole & Aldrich.

One male and four females were taken. One female at Katmai, Alaska, in July, 1917, and three females and the male at the same place in August, 1917.

This was described from females; the following is a description of the male:

Length, 3.5 mm.; of these females, 4 mm. Face moderately wide, silvery white, palpi yellow. Front shining green. First antennal joint yellow, with the extreme upper edge a little brown; second and third joint black, third a little longer than wide, pointed at tip; lateral and inferior orbital cilia white.

Hypopygium black; its lamellæ of moderate size, somewhat oval, but tapering into the stem, white with a rather wide black apical border, jagged and bristly at apex.

Fore coxæ wholly yellow, their anterior surface covered with silvery white pollen and minute black hairs, a few on the outer edge yellow; middle tibiæ with an elongated silvery or opalescent spot on upper surface at tip which extends for about one-fourth their length. The black hairs on the sides of hind femora very small, but extending nearly to the lower edge; no longer hairs below. Hind tibiæ black at tip for one-sixth their length, only a little thickened, the glabrous streak on upper edge between the rows of large bristles can be traced, but is indistinct.

Middle tarsi about as long as their tibiæ, wholly deep black; first joint without a bristle above; as long as the two following taken together. Hind tarsi wholly black.

Wings grayish hyaline; costa not or scarcely enlarged at tip of first vein; last section of fourth vein a little bent before its middle, nearly parallel with third towards its tip; anal angle very prominent.

The female has the first two antennal joints and part of third yellow, while this male has only the first joint yellow; still I have no doubt of their being the same species.

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## EXPLANATION OF PLATE.

- Fig. 1. *Porphyrops consobrinus* Zett. Fore tarsus of male.  
Fig. 1a. Outer lamella of same.  
Fig. 1b. Inner appendage of the hypopygium of same.  
Fig. 2. *Porphyrops elegantula* Meig., hypopygium of male.  
Fig. 3. *Porphyrops crassipes* Meig., middle tarsus of male.  
Fig. 3a. Fore tarsus of male of same.  
Fig. 4. *Porphyrops tricaudata*, new species, Hypopygium of male.  
Fig. 4a. Fore tarsus of same.  
Fig. 5. *Porphyrops nigra*, new species, fore tarsus of male.  
Fig. 5a. Outer lamella of same.  
Fig. 5b. Inner appendage of hypopygium of same.  
Fig. 6. *Porphyrops borealis*, new species, hypopygium of male.  
Fig. 7. *Hydrophorus canities* new species, fore femora of male, anterior side.  
Fig. 7a. Posterior side of same.  
Fig. 8. *Hydrophorus pictinipes*, new species, fore femora and tibia of male.  
Fig. 9. *Hydrophorus propinquus* new species, fore femora of male.  
Fig. 10. *Hydrophorus flavihirtus* new species, fore femora of male.  
Fig. 11. *Hydrophorus viridifacies*, new species, fore femora of male.

